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K O K E E

Alvin K. Chock

Surrounded by forests high in the mountains of Kauai is Kokee, located on the northwestern portion of that island. Nearby is the splendor of Waimea Canyon, Hawaii's "Grand Canyon of the Pacific", one mile wide and over a half mile deep, with its rugged, colorful slopes and cliffs. To the north and east is the wet and boggy Alakai Swamp, created by Waialeale, the wettest spot in the world, where the annual average rainfall is 460 inches. Its waters plunge into the many valleys surrounding it. These steep, spectacular cliffs cut by deep (over 3,000 feet) valleys are filled with luxuriant vegetation. This is Kokee, where much of the endemic vegetation of Kauai is found. This is the area now being considered for incorporation within the National Park Service system.

Kokee is located in the mountains of west Kauai, and consists of two parks: Kokee State Park with a total area of 4,640 acres which also includes portions of the Na Pali coast and valleys, and Waimea Canyon State Park, south of Kokee, 887 acres. The area is under the jurisdiction of the Division of State Parks, Department of Land and Natural Resources, State of Hawaii. In the thirties it was the site of a CCC camp, and during the war, an army camp. It has long been a popular area for recreation by local residents, many of whom have leased home sites and go "mauka" (Hawaiian word meaning 'toward the mountains'; local usage, Kokee) during the summer. One of the Pacific Guided Missile tracking stations is located in Kokee, and the area is the site of a proposed water development project.

Until the Division of State Parks (then Territorial) was created in 1949 and funds made available several years later, these areas were under the supervision of the Division of Forestry. The present staff is at a minimum and needs to be increased in the protective, maintenance, and interpretive sections if the area is to be continued under State jurisdiction. Expenditures to the present time have been small and the establishment of a state parks system according to mainland standards is yet to be accomplished. Comprehensive plans for development of state park areas, of which Kokee is the largest, have been formulated to attain this goal.

The only paved public road in the park is 20 miles in length, from its access point in Kekaha to the Kalalau Lookout (Mileage from Kekaha Post Office: Waimea Canyon Park entrance, 7 miles; Waimea Canyon lookout, 11 miles; Puu Ka Pele ranger station and picnic shelter, 14 miles; Kokee Park entrance, 15 miles; Kokee park headquarters and natural history museum, 17 miles; Kalalau lookout, 20 miles). There are

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also several jeep roads within Kokee Park. Over 76 miles of improved trails form a network leading to scenic vistas in the Kokee, Na Pali, and Alakai Swamp areas. Accomodations (cabins and barracks) and eating facilities are operated by a concessionaire. There are also a number of picnic areas throughout the park.

Most of the park is located on a plateau above the Na Pali coast with elevations varying from 3,500 to 4,000 feet. This is disected by many valleys and gulches. The rainfall is from 10 to 250 inches annually. Topographic features vary from the bog of Alakai Swamp to the valley floor of Waimea Canyon with its rock walls weathered to a rainbow of colors by sunlight, rain, atmospheric, and erosional factors.

Wild goats, pigs, and chickens, all introduced by man, are found in the forests. The keen observer will still be able to see some of the endemic Hawaiian birds.

THE VEGETATION

Hawaii has perhaps the highest percentage of endemism in the world, for over 94% of the flowering plants are found only in the islands. There are many rare plants in the park, some restricted in distribution to Kokee, and all worthy of preservation. Plants of recent introduction, such as the blackberry (Rubus penetrans), firebush (Myrica faya), malabar melastome or Isenberg bush (Melastoma malabathricum), and lantana (Lantana camara) have spread to such an extent that they are destroying the native vegetation. Of particular concern is the blackberry, forming inpenetrable thickets, crowding out and strangling the native shrubs and herbs, and making it impossible to wander off the trail.

The forests are beautiful, and 'ohi'a lehua (Metrosideros collina ssp. polymorpha) and koa (Acacia kauaiensis here) are the dominant trees. The lehua has red blossoms, brush-like in appearance because of the conspicuous red stamens. The wood is extremely hard and was used for railroad ties in the West during the 1800s. Often seeds will germinate in the woody trunks of tree ferns with the roots enclosing the fern until it finally dies, decaying within the enclosed stilt-like roots of the 'ohi'a. The koa possesses sickle-shaped "leaves" which are really flattened petioles. The true leaves are feathery in appearance, found only on young or injured branches. These gradually pass from bipinnately compound leaves to the phyllodia. Canoes in ancient times were often made from koa logs. In some areas at lower elevations the koa is replacing the exotic species planted during the reforestation program.

The Lobelioids are either shrubs or trees with conspicuous and attractive flowers. There are six endemic genera and one of world-wide distribution (with many endemic species), all known to the Hawaiians as haha. The hahalua (Cyanea leptostegia) is palm-like in appearance, often forty feet high and fairly abundant in Kokee. Lobelia yuccoides, with its spectacular blue flowers, is a showy plant. Another Lobelioid, somewhat rare, is the monotypic alula (Brighamia insignis).

The native white Hibiscus of koki'o-ke'oke'o (H. waimeae) is a tree 20-30 feet high with fragrant white blossoms and grows along the dryer slopes. The green silversword or iliau (Wilkesia gymnoxiphium) has its habitat at the edges of canyons and bluffs of the dry leeward slopes. Many of the shrubs in the forest are members of the family Rubiaceae, including Bobea, Coprosma, Gardenia, Gouldia, Hedyotis, Plectronia, Psychotria, and Straussia. Many species of Pelea (named for the Hawaiian goddess Pele) are found, but the best known species is the mokihana (P. anisata), the "flower" of Kauai. The fragrant fruits have the odor of anise, and the Hawaiians threaded them together to form leis or wreaths. The capsules are found more abundantly in the early fall. Also part of the flora are the loulu palms (Pritchardia spp.) and the sandalwood or 'ili-ahi (Santalum pyrularium).

In the wetter parts of the forests the mosses and filmy ferns form a carpet on valley and ridge floors, as well as on tree trunks and branches. Some of the ferns (Cibotium and Sadleria) attain tree-size. Epiphytic ferns and the epiphytic lily, pa'iniu (Astelia spp.) are found on tree trunks and fallen logs. The

kanawao (Broussaisia spp.) of the hydrangea family flowers abundantly and has shiny leaves and attractive red berries. Alakai Swamp is filled with the pretty, feathery red blossoms of the stunted 'ohi'a lehua (Metrosideros collina ssp. polymorpha var. pumila). A curious plant is the insectivorous miki-nalo (Drosera longifolia) distributed throughout the northern part of the Northern Hemisphere, but in the Hawaiian Islands is found only on Kauai.

There are species of violets and daisys which are shrubby. The mamaki (Pipturus spp.) bark furnished the Hawaiians in ancient times with the fiber for their kapa or bark cloth, and was second in importance to the wauke. The naupaka or half flower (Scaevola spp.) is interesting because it appears to be only half of a flower. These and other species, many of which are found only on Kauai, form an interesting part of the luxuriant tropical vegetation which should be preserved forever.

KOKEE NATURAL HISTORY MUSEUM

The park museum project was born in September 1951 when Joseph Souza, then ranger in charge, suggested the idea to Mrs. Ruth Knudsen Hanner and others. The then Division of Territorial Parks could provide a building, but nothing for maintenance or exhibits. This was brought to the attention of the Kauai Historical Society, and a committee was formed to formulate the plans for a natural history museum. It was decided to call the museum's supporting organization Hui o Laka. Laka was the hula goddess and this diety was associated with happiness and plants. A double heiau on the northwestern coast near Haena has a portion dedicated to Laka.

Scientific help was sought from the University of Hawaii, with expenses provided by key members of the Hui. The 1953 summer expedition consisted of Misses E. Alison Kay and Shirley Trefz, marine biologists who spent several weeks along the Na Pali coast collecting reef marine life; Mary Stacey (now Mrs. Charles Judd), archaeologist who studied old Hawaiian house sites in the Na Pali valleys; Dr. D. El Elmo Hardy, entomologist who collected insects in Kokee for two weeks; and Alvin K. Chock, botanist who spent five weeks collecting plants. Residents of Kauai accompanied the scientists on their field trips and served as able assistants, including Mrs. Juliet Rice Wichman, Dr. Marvin Brennecke, Jean Laidlaw, Alan Faye, Jr., Blaine Boyden, Tarn Cooper, the Ku Malama family, and George Cliff. The latter is the custodian of the museum. Mr. Donald Richardson, geologist, spent several days in Na Pali and Waialeale. Mr. Howell Walker, a member of the National Geographic Society staff, was also on many of the trips which were arranged by Mrs. Ruth Knudsen Hanner.

The Kokee Natural History Museum opened its doors on November 28, 1953 with a budget of $648, accumulated from the one dollar Hui o Laka life membership fees and public contributions. The exhibits consist of live plants and herbarium specimens; paintings, lithographs, and petroglyph rubbings; geological specimens; insect collections; mammal heads; marine and land shells; Hawaiiana and maps. Although public support and interest has dwindled somewhat, the museum is nevertheless a monument to the determination and interest of Kauai residents, and an indication of what individuals interested in natural history subjects can accomplish.

SOCIETY MEETING

DATE: March 4, 1963 - 7:30 p.m.

PLACE: Agee Hall, Experiment Station of the Hawaiian Sugar Planters' Association, 1527 Keeaumoku Street, Honolulu.

SUBJECT: "Geographical distribution of New World cottons" (illustrated)

SPEAKER: Dr. S. G. Stephens, Visiting Professor of Genetics, University of Hawaii. Dr. Stephens is William Neal Reynolds Professor of Genetics at the North Carolina State College at Raleigh. He was born in Dudley, England and received his B. A. and M. A. from Cambridge University and his Ph.D. from Edinburgh University. He held the following positions before joining N. C. State College in 1949: Assistant Geneticist, Empire Cotton Corporation Research Station, Trinidad, British West Indies (1938-44); Assistant Professor of Genetics, McGill University (1944-45); Research Associate in Genetics, Cold Spring Harbor, Carnegie Institution (1945-47); Professor of Genetics and Cotton Cytogenetics, Texas A & M College (1947-49). Dr. Stephens collected native and wild cotton species for the Empire Cotton Corp. in Central America in 1946 and visited Central America and the West Indies again in 1959-60 under the auspieces of a Guggenheim Fellowship. He is particularly concerned with Gossypium genetics and will study the endemic species G. tomentosum while in Hawaii. Examination of this species and related genera are being made during his weekly visits to the B. P. Bishop Museum Herbarium until he returns to the mainland in June.

MEETINGS: The Hawaiian Botanical Society holds its meetings on the first Monday of each month (except July, August and September) at 7:30 p.m. in Agee Hall.

EDITOR'S NOTES

LATE ISSUE: Apologies are extended to Society members because of the late distribution of this issue. Its production was delayed because of the February 22 holiday and the short month. Contributors to the Newsletter are reminded that news items should reach the Editor no later than the 20th of each month. In the past, phone calls were made prior to the monthly deadline, but this will be discontinued due to the pressure of other duties. Articles should be submitted in writing to Alvin K. Chock (Editor), c/o Herbarium, B. P. Bishop Museum, Honolulu 17, or c/o Department of Botany, University of Hawaii, Honolulu 14.

FEATURE STORIES: Each issue will contain a feature story on a timely topic of general interest. This month, because of the current feasibility study of a National Park on Kauai, a story (long in the Editor's files) about Kokee was written. Future articles planned are Botany at the Bishop Museum, the proposed Plant Science Building at the University of Hawaii, Na La'au Hawaii Arboretum, and a field trip guide for the botanical foray planned in the summer. Other research institutions in Hawaii and other topics will also be included at later dates.

PARKS

NATIONAL PARK STUDY ON KAUAI: The National Park Service is studying the possibilities of establishing a National Park on Kauai. As envisioned, this would include the Na Pali coast from Haena Beach to Kalalau Valley, Alakai Swamp to Mt. Waialeale, the Kokee and Waimea Canyon regions, an area of approximately 125 square miles.

This project was recommended by the international 10th Pacific Science Congress during its meetings here in 1961, by the passage of a resolution. A number of leading citizens and conservation groups both here in Hawaii and elsewhere are also in favor of integrating this area as part of the National Park System. There is some local opposition, however, from hunters and lesees of home sites in the present Kokee State Park.

The Department of Interior, according to Secretary Stewart L. Udall, intends to explore all of the viewpoints expressed. All land usage factors, including State Park purposes, mountain cabins, hunting and other recreational aspects, grazing, agricultural, water development, Pacific Missile Range space activities, and other possible uses, will be considered during the feasibility study. The firm of Harland Bartholomew and Associates (925 Bethel Street, Honolulu 13) has been retained and will coordinate material collected during the study.

Consideration of this area on the island of Kauai as a National Park is being made because of the spectacular cliffs and scenery, the still unspoiled beaches of white sand, the Alakai Swamp, plunging into the Wainiha Gorge and the Waimea Canyon, which contain features not yet preserved in the National Park System.

STATE PARKS: The recent Capital Improvements Program for 1963-69 submitted by Governor John A. Burns to the State Legislature, contains a six-year program for state parks improvements and projects. These include Kahana Valley Park, Oahu, $4,100,000 ($405,000, including $105,000 federal funds during the 1963-64 fiscal year); Mauna Kea Park, Hawaii, $495,000 ($25,000 in 1963-64); Honokawai Park, Maui, $1,300,000 ($260,000, including $105,000 federal funds in 1963-64); Kokee Park, Kauai, $220,000 ($30,000 in 1963-64); Wailua River Park, Kauai, $165,000 ($40,000 in 1963-64); Wailoa River Park, Hawaii, $140,000 ($30,000 in 1963-64); Keaiwa Heiau Park, Oahu, $45,000 (beginning in 1965); Lava Tree, MacKenzie, Manuka, and Akaka Falls Parks, Hawaii, $88,000 (beginning in 1965); and Wainapanapa Caves Park, Maui, $210,000 (beginning in 1965). (AKC)

P A C I F I C S C I E N C E A S S O C I A T I O N [1]

Coconut Research Station, New Hebrides: Methods of improving the yield of New Hebrides coconut plantations by means of plant selection and the use of fertilizers will be studied by the staff of a research station being established at Santo by the Institut pour la Recherche des Huiles et Oléagineux. The work will involve extensive soil and leaf analyses to determine deficiencies needing correction by fertilizers.

New Zealand Nature Conservation: Seven members were appointed to the first Nature Conservation Council in New Zealand in December 1962. The Council will advise the Government on nature conservation matters, and has the power to make its views known to the public. It will be an independent body to coordinate scientific and technical information on nature conservation and to inquire into the effects of proposed works on any aspect of conservation.

Bibliography Award: The American Library Association's Oberly Memorial Award, made every two years for the best bibliography in the field of agriculture or the related sciences, was won in 1961 by the "Bibliography of Eastern Asiatic Botany, Supplement I," by Dr. Egbert H. Walker. It was published by the AIBS and sponsored by the NSF.

Botanic Gardens: Papers from the "Tropical Botanic Gardens in the Pacific and Southeast Asia" symposium of the 10th Pacific Science Congress were published in "The Garden Journal" in 1962. Copies ($0.75 each) may be obtained from the New York Botanical Garden, Bronx Park, New York 58, New York. The symposium convenor was Dr. Constance E. Hartt of the HSPA Experiment Station, who also made a tape recording of the session. Each article is profusely illustrated.

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[1] Pac. Sci. Assn. Info. Bul. 15(1): 1-13 + i-ii, Jan. 1963.

Vol. 12(2). A century of progress: the contributions of Botanic Gardens, Singapore, to the development of Malaya, by H. M. Burkill (paper was read by W. W. Goodale Moir at the symposium); vol. 12(3). The utility of botanical gardens in the modern world, by K. N. Kaul; vol. 12(4). Starting from scratch: the Botanic Garden at Lae, by J. S. Womersley (paper read by Dr. Hartt); vol. 12(5). The Botanical Gardens in Indonesia, by Sadikin Sumintawikarta; and vol. 12(6). Foster Botanical Garden, by Paul R. Weissich.

N E W P U B L I C A T I O N S

BISHOP MUSEUM ASSOCIATION: The Conch Shell (Bishop Museum News) appears in a new format in the Spring 1963 issue (Vol. I, No. 1). Sponsored by the Bishop Museum Association as in the past, its aims are to provide an interesting and stimulating means of communicating news of Museum programs in research and exhibition, staff activities, and informative articles covering a wide range of subjects. The Bishop Museum's collections contain many different types of materials: diaries, field accounts, prints, photographs, historical documents, unpublished manuscripts, as well as artifacts and specimens. The new bulletin provides a means to present some of this material with graphic illustration and attractive presentation.

Editor and Designer of The Conch Shell is Joseph Feher (Artist-Historian); Managing Editor, Genevieve Highland (Museum Press Editor); Contributing Editors: Dorothy Barrere (Associate in Hawaiian Culture), Brenda Bishop (Pacific Science Association); Edwin H. Bryan, Jr. (Curator of Collections and Manager, Pacific Science Information Center); Oswald A. Bushnell (Editor-in-Chief, Pacific Science, and Professor of Microbiology, University of Hawaii); Anne Harding Spoehr (wife of the former Director); Amy Suehiro (Entomologist); and Margaret Titcomb (Librarian).

Subscription price is $4.00 a year (single Issue, $1.00), and the quarterly publication is sent free to all members of the Bishop Museum Association. The first issue contains 12 pages and 10 illustrations. For further information, call the Association's membership office, tel. 845-325, or the Museum, 855-951.

THE ASSOCIATION FOR TROPICAL BIOLOGY: Bulletin No. 1 contains the proceedings of The Neotropical Botany Conference held at the Imperial College of Tropical Agriculture in Trinidad, West Indies. The conference was held on July 2-6, 1962, and includes discussion on taxonomy and collecting, ecology and conservation, morphology and anatomy, physiology, cytogenetics, cryptogamic botany, economic botany, evolution, and resolutions and recommendations. It also resulted in the formation of the Association. While at present the New World Tropics are emphasized, this international organization is intended to encompass all biological phases of the tropics. Thirty delegates from Latin America, the U. S., Holland, and the Caribbean attended.

The aims of the organization are to stimulate, encourage, and support research in tropical biology; promote the training and interchange of students, teachers, and investigators in this field; and develop facilities to attain the objects stated. The first issue contains 120 pages and includes a frontispiece. Membership dues are $1.00; the price of the bulletin is $2.50. Further information may be obtained from Professor J. W. Purseglove, Imperial College of Tropical Agriculture, University of the West Indies, St. Augustine, Trinidad, West Indies. (AKC)

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C O N S E R V A T I O N C O U N C I L F O R H A W A I I

CONSERVATION CONFERENCE: The Second Annual Conservation Conference was held at the Princess Kaiulani Hotel on February 12. This conference derived its beginning from the State Parks Conference sponsored last year by the Honolulu Chamber of Commerce. The group which participated in the conference was merged with the Conservation Council, as the Recreation Committee.

The program included the introductory remarks by W. Michael Ord of the International Banking Department, Bank of Hawaii, who served as chairman of the conference; the opening address by The Honorable John A. Burns, Governor of Hawaii; "State Land Use Act", by Donald H. Wolbrink, Partner, Harland Bartholomew and Associates; "National tropical botanical gardens and conservation", by W. W. Goodale Moir, President, Hawaiian Botanical Gardens Foundation, Inc.; "Open space - Hawaii's disappearing wealth" (illustrated), Robert Wenkam, Vice-President, Federation of Western Outdoor Clubs; "The National Park Service and outdoor recreation", Fred T. Johnston, Superintendent, Hawaii Volcanoes National Park; "Na La'ua Hawaii Arboretum" (illustrated), Charles H. Lamoureux, Chairman, Department of Botany, University of Hawaii, and Mrs. A. A. Carswell, Garden Club of Hawaii; "Protecting natural resources in estate planning", Alan S. Davis, Chairman, Board of Trustees, Campbell Estate; "Progress and planning for Hawaii's future", Dr. Roland W. Force (Council President), Director, B. P. Bishop Museum; "Conservation of Hawaiian marine resources", William A. Gosline, Professor of Zoology, University of Hawaii; "State's wildlife management program", Michio Takata, Division of Fish and Game, Dept. of Land and Natural Resources, State of Hawaii; and "Birds of Hawaii" (movie and tape recording), William Ward, Bank of Hawaii. A short talk on the efforts made in the preservation of Philadelphia's historical sites was made during the luncheon by guest Judge E. Lewis of Philadelphia.

George C. Munro was presented with the first annual award of the Council for his efforts in conservation, ornithology, and botany. Munro, now 97 years old, was unable to attend the conference. Hector G. Munro, his nephew, accepted a copy of "Flowering Trees of the World" on his behalf. George Munro is noted for his contributions to the bird collections in Hawaii, the Lanai forests, and the state park, Na La'au Hawaii Arboretum.

Exhibits at the conference included the Nuuanu Pali Natural Park (Honolulu Chamber of Commerce), land use designation maps of each island (Dept. of Land and Natural Resources, State of Hawaii), Oahu trail map (Hawaiian Trail and Mountain Club), Honouliuli estate development master plan (Campbell Estate), soils program (Soils Conservation Service, U.S.D.A.), and state parks map (State Parks Division, Dept. of Land and Natural Resources). (AKC)

B O T A N I C A L N O T E S

PINEAPPLE RESEARCH INSTITUTE: Dr. Arthur Lange left for the University of California at Davis where he will work on weed control with the Extension Service. Dr. Donald H. Smith accepted the position of Director of Research of the Philippine Packing Corp. on Mindanao Island. (RWL)

INTERMEDIATE SCIENCE CAMP: A science camp for intermediate school students was held at Camp Erdman on February 8-10. Lecturers included Miss Beatrice Krauss, Dr. Paul Ekern, Dr. Donald Gowing of the Pineapple Research Institute; Dr. Tom Cooperrider and Dr. Paul Scheuer of the University of Hawaii; and Alvin K. Chock of the B. P. Bishop Museum. The program was under the direction of Donald Li of the Hawaiian Science Clubs Service. (RWL & AKC)

STATE DEPT. OF AGRICULTURE: Noel Krauss was in New Caledonia and the Loyalty Islands. Next month he will go to the mainland to look for natural predators of the wild blackberry which is firmly established in several areas of the Islands. (BK & RWL)

HAWAIIAN BOTANICAL GARDENS FOUNDATION, INC.: The annual meeting was held on January 29, highlighted by a talk on Madagascar, Mauritius, and Reunion Islands by President W. W. Goodale Moir. During the past year two national surveys on a National Tropical Botanic Garden were made during the summer by the Botanical Society of America and the U. S. Department of Agriculture. Robert Allerton of Lawai, Kauai, gave $75,000 to the Foundation in December. At the present time 47 organizations are sponsoring members, of which 24 are local, 22 national, and one foreign.

Five of the trustees were re-elected: Mrs. Harlan Benner, Mrs. A. Lester Marks, J. Scott B. Pratt, H. Ivan Rainwater, and Paul Weissich. Dr. Donald P. Gowing was elected to the board. At the annual trustees meeting, which followed the annual meeting, Moir was re-elected president; Mrs. Marks, vice-president; Dr. Constance Hartt, secretary; John N. Warner, treasurer; and Joseph P. Martin, assistant treasurer. (CEH & AKC)

PLANT QUARANTINE DIVISION (USDA): The Conference of Pacific Region Pathologists (Plant Quarantine Division, Agricultural Research Service, U. S. Department of Agriculture) will take place in San Francisco on April 2-4. Participating in the conference are Jules Fine, Honolulu; Dr. William J. N. Brown, Seattle; John A. Lindsay, San Pedro, and Ronald M. Ireland, San Diego. Topics to be discussed include diseases mentioned in quarantines, use of the herbaria, diseases in ship's stores and packing materials, stimulating inspectors' interest in pathology, foreign site inspection, seed borne diseases, diseases of fruits and vegetables, and the mandarin orange treatment experiment. (AKC)

FRIENDS OF FOSTER GARDEN: A spring show will be held on March 15-17 in Turner Hall, Fort De Russy. There will be no admission or entry fees. There are several categories in the horticultural and artistic competitions. Further information may be obtained by phoning 571-708.

VISITORS: Dr. J. D. Sauer, Department of Botany, University of Wisconsin, visited the Herbarium of the Bernice P. Bishop Museum while en route to Australia and Cocos Island on a trip around the world. He is a specialist in Canavalia. (MN)

Dr. F. Raymond Fosberg of the Department of Interior, Dr. Robert E. Alexander of the Office of Naval Research, and Dr. Marie-Hélène Sachet of the Pacific Vegetation Project stopped briefly in Honolulu. They will spend two weeks in Guam examining the effects of the 1962 typhoon, and several days on Wake before returning to Washington, D. C. They plan to spend several days at the B. P. Bishop Museum and University of Hawaii on their return trip. Dr. Fosberg is currently working on the Hawaiian Rubiaceae. (AKC)

U N I V E R S I T Y O F H A W A I I

GIFTS & GRANTS: From the National Science Foundation, $24,920 for the purchase of scientific equipment for the Department of Microbiology; from the Hawaiian Sugar Planters' Association, $5,000 for Hawaii Agricultural Experiment Station research; from Kealakekua Ranch, Ltd., a parcel of land in Kona for the Agricultural Experiment Station; and from Dean E. S. Harrar of Duke University, forestry publications.

DEVELOPMENT PLAN: The Bureau of Business Research made an agreement with the State Department of Land and Natural Resources to conduct research, entitled, "A recreational-economic evaluation and development plan for the Pohakuloa-Mauna Kea Recreational Area, County of Hawaii."

NEW COURSE: Science 520, Case Histories in Science.

VISITING PROFESSORS: Dr. Lindsay S. Olive is Visiting Professor of Botany this semester. He is with Columbia University in New York, and was born in Florence, South Carolina. He received his A.B., M.A., and Ph.D. from the University of North Carolina, where he was also Instructor in Botany (1942-44). He was also Mycologist with the USDA (1944-45), Assistant Professor of Botany at the University of Georgia (1945-46), and Associate Professor of Botany at Louisiana State University (1946-49) before joining Columbia in 1949. He will make a return trip to the South Pacific this summer.

Dr. S. G. Stephens, Visiting Professor of Genetics, will be the speaker at the Society's meeting this month.

Dr. Charles M. Rick, Jr., Carnegie Visiting Professor of Horticulture this semester, was born in Reading, Pennsylvania. He received his B. S. from Pennsylvania State College and his M. A. and Ph. D. from Harvard University. He joined the Department of Vegetable Crops, University of California at Davis in 1940. He held a Guggeheim fellowship in 1949 and 1951, and a Rockefeller research fellowship in 1956-57. He was honored with the Vaughan Award in 1945 by the Society for Horticultural Science and the Campbell Award in 1959 by the AAAS. Dr. Rick was also Visiting Lecturer at North Carolina State College in 1956. He is a specialist in the cytogenetics of vegetable crops, especially the tomato. (AKC)

O R G A N I Z A T I O N A L N O T E S

CONSTITUTIONAL AMENDMENT: Article VI, Section 4: "Any member in arrears of dues after the following year's dues are payable shall be dropped from the rolls one month after being billed for the delinquent and current dues if both have not been paid within that period. Members dropped for dues deliquency shall be reported to the Secretary and to the Executive Committee by the Treasurer."

NEW MEMBERS: Dr. Thomas J. Sheehan, Visiting Professor of Horticulture, University of Hawaii, Honolulu 14; Mrs. Thomas J. (Marion) Sheehan, 2584 Lemond Road, Honolulu; Dr. Elizabeth McClintock, Associate Curator of Botany, California Academy of Sciences, Golden Gate Park, San Francisco, California; Mr. Leslie W. Wishard, Kamuela, Hawaii.

REINSTATED MEMBERS: Dr. Paul C. Ekern, Jr., Pineapple Research Institute of Hawaii, Honolulu 14; Dr. Richard S. Cowan, Assistant Director, Museum of Natural History, Smithsonian Institution, Washington 25, D. C.; Dr. F. Raymond Fosberg, Pacific Vegetation Project, National Research Council, Washington 25, D. C.

SCIENCE FAIR AWARDS: The Society voted to continue their contributions for the best botanical exhibits in the Sixth Hawaiian Science Fair. The "wish award" sum for the Senior Division is $15, and for the Intermediate Division, $10.

BOTANICAL FORAY: Plans for a botanical foray this summer are now underway with Miss Beatrice Krauss undertaking the preliminary planning. The membership indicated enthusiastic approval of the project at the last meeting.

ROCKIA: A photograph taken in 1934 of the late Dr. J. F. Rock by Ray Jerome Baker was donated to the Society. The article which appeared in the January issue of the Newsletter will be published in April (instead of March, as previously announced) issue of Taxon. (TM & AKC)

I S S E C

The Inter-Society Science Education Council (ISSEC) of the Hawaiian Academy of Sciences and its 18 associated scientific societies was formed in May 1958 by the academy's council to coordinate and undertake activities in the field of science education.

ISSEC arose from a desire on the part of Hawaii's scientific community to perform a useful service by applying its knowledge and experience to aid science education at the pre-collegiate level in the natural, physical and social sciences, mathematics, and related fields.

It operates through its members who devote much of their spare time to the different projects, and through the financial support of the community, the National Science Foundation and the Alfred P. Sloan Foundation of New York. The program is a continuing and expanding one, and financial support has become an increasingly serious problem. Contributions may be sent to the ISSEC Science Education Fund (c/o Dwight H. Lowrey (treasurer), Cooke Trust Company, Honolulu 13, Hawaii). Individuals wishing to devote time to its projects should contact Mrs. H Ivan Rainwater, ISSEC Chairman (Bishop Museum, Honolulu 17) or Dr. Alexander Spoehr, Community Participation Committee Chairman (East-West Center, University of Hawaii, Honolulu 14).

The ISSEC program includes the following activities and projects (names of the directors are indicated in parenthesis):

Hawaiian Science Fair (Robert E. Coleman, USDA - An annual exhibit of science projects to encourage experimentation and an understanding of the scientific method. The 1963 fair will be held on March 15-17.

Elementary Mathematics - A program to strengthen elementary mathematics teaching.

Teachers' Science Seminar Series (Paul Ekern, PRI) - A lecture program to keep teachers and the public up to date with current advances. During the annual science fair, teaching methods workshops are conducted.

Students' Science Seminar Series (Albert B. Carr, UH) - Highly selected groups of high school juniors and seniors meet weekly with scientists to broaden their knowledge and stimulate their interest in science.

Science Clubs Service (Wallace Sanford, PRI, and Donald Li, HSCS) - this project aids in the formation and maintenance of interest in schools' science clubs. Lecturers, field trips, film loans, science literature, science project advice and weekly TV programs on three stations are a regular part of this service.

Elementary Science Texts (Sister Mary St. Lawrence) - A project, cooperative with the Roman Catholic School System, providing science texts for grades 1-8.

Science Teacher Coordination (Edwin Y. H. Chinn, Dept. Educ.) - The coordination of various ISSEC activities with science teachers to insure that seminars, teaching aids, and science fair material is available.

Junior Academy of Science (Alvin K. Chock, USDA, Bishop Museum and UH) - The provision of the presentation of research papers at an annual meeting.

Counseling and Scholarships - A program to aid counselors and science teachers in advising qualified students about suitable colleges or universities and scholarship opportunities.

Visiting Scientists (Wallace Sanford, PRI, and Donald Li) - Scientists will spend one-half to a full day at schools to give assistance to high school students and teachers through conferences and demonstrations.

Science Teacher Workshop - Designed to provide secondary science teachers a means of increasing their knowledge and practical skills in the classroom.

Science Television and Radio (Donald Li) - These programs offer a continuous, comprehensive variety of topics in science to increase understanding and appreciation of science in our modern world.

Other ISSEC officers are: H. Wayne Hilton (HSPA), Vice Chairman; Adrienne Kaeppler (Pacific Science Information Center, Bishop Museum), Secretary; John H. Payne (HSPA) and George Sloane (HSPA), Budget; Robert Wiemer (HSPA), Public Relations; and Carolyn Crawford (Dept. Educ.), Science Library Resources.

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H A W A I I A N B O T A N I C A L S O C I E T Y

c/o Department of Botany, University of Hawaii, Honolulu 14, Hawaii

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The HAWAIIAN BOTANICAL SOCIETY was founded in 1924 to "advance the science of Botany in all its applications, encourage research in Botany in all its phases," and "promote the welfare of its members and to develop the spirit of good fellowship and cooperation among them." "Any person interested in the plant life of the Hawaiian Islands is eligible for membership in this Society."

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The Hawaiian Botanical Society Newsletter is published monthly, except during the summer months of July, August, and September. It is distributed to all Society members and other interested individuals and institutions, with the purpose of informing them about botanical news and progress in Hawaii and the Pacific. News contributions and articles are welcomed. The deadline for submission of news items is the 20th of each month prior to publication.

Duplicated at the University of Hawaii and Bernice P. Bishop Museum.

Membership Dues are $2.00 per calendar year and include receipt of the Newsletter.

HAWAIIAN BOTANICAL SOCIETY
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Honolulu 14, Hawaii

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